WHAT IS CLAIMED IS:

1. A crystal puller for producing a monocrystalline ingot, the crystal puller comprising:

a susceptor having a bottom and a side wall;

a crucible for holding molten source material, said crucible being received in the susceptor and having a side wall disposed in generally radially opposed relationship with the susceptor side wall;

a heater in thermal communication with the susceptor and crucible for heating the crucible to a temperature sufficient to melt the source material held by the crucible;

a pulling mechanism positioned above the crucible for pulling the ingot from the molten source material held by the crucible; and

a sealing member adapted for close contact relationship with the crucible side wall and the susceptor side wall to generally seal between the crucible and the susceptor any gaseous product resulting from a reaction of the crucible with the susceptor against escape from between the crucible and the susceptor thereby retarding the reaction of the crucible with the susceptor.

2. A crystal puller as set forth in claim 1 wherein the uppermost radially opposed relationship between the crucible side wall and the susceptor side wall defines a seam therebetween, the sealing member being in close contact relationship with the susceptor side wall and the crucible side wall generally over said seam to generally seal any gaseous product resulting from a reaction of the crucible with the susceptor against escape from between the crucible and the susceptor.

3. A crystal puller as set forth in claim 2 wherein the seam is defined by the crucible side wall and an upper rim of the susceptor side wall, the sealing member seating on the upper rim of the susceptor side wall in close contact relationship with the crucible side wall substantially about the entire circumference of the crucible side wall generally over said seam.

4. A crystal puller as set forth in claim 3 wherein the crucible side wall extends up within the crystal puller to above the upper rim of the susceptor side wall such that the seam is defined by the upper rim of the susceptor side wall and an outer surface of the crucible side wall, the sealing member seating on the upper rim of the susceptor in close contact relationship with the outer surface of the crucible side wall substantially about the entire circumference of the outer surface of the crucible side wall generally over said seam.

5. A crystal puller as set forth in claim 1 wherein the sealing member is constructed of graphite.

6. A crystal puller as set forth in claim 5 wherein the sealing member is constructed of isomolded graphite.

7. A crystal puller as set forth in claim 1 wherein the susceptor is constructed of at least two pieces, the susceptor pieces generally abutting one another other along a seam comprising a generally vertically extending segment within in the side wall of the susceptor.

8. A crystal puller as set forth in claim 7 wherein the vertically extending segment of the seam between abutting susceptor pieces is directed generally non-radially through the side wall of the susceptor such that the susceptor pieces radially overlap each other along the seam to further inhibit gaseous product against escaping from between the susceptor and the crucible.

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9. A susceptor assembly for use in a crystal puller of the type used for growing a monocrystalline ingot from molten source material contained in a crucible in the crystal puller, the susceptor assembly comprising:

a susceptor having a bottom and a side wall, the susceptor being sized for receiving and holding the crucible in the crystal puller, the side wall of the susceptor being in generally radially opposed relationship with a side wall of the; and

a sealing member adapted for close contact relationship with the crucible side wall and the susceptor side wall to generally seal between the crucible and the susceptor any gaseous product resulting from a reaction of the crucible with the susceptor against escape from between the crucible and the susceptor thereby retarding the reaction of the crucible with the susceptor.

10. A crystal puller as set forth in claim 9 wherein the uppermost radially opposed relationship between the crucible side wall and the susceptor side wall defines a seam therebetween, the sealing member being adapted for close contact relationship with the susceptor side wall and the crucible side wall over said seam to generally seal between the crucible and the susceptor any gaseous product resulting from a reaction of the crucible with the susceptor against escape from between the crucible and the susceptor.

11. A crystal puller as set forth in claim 10 wherein the susceptor side wall has an upper rim, the seam being defined by the crucible side wall and the upper rim of the susceptor side wall, the sealing member being adapted for seating on the upper rim of the susceptor side wall in close contact relationship with the crucible side wall substantially about the entire circumference of the crucible side wall to seat over said seam.

12. A crystal puller as set forth in claim 11 wherein the susceptor is sized such that the crucible side wall extends up within the crystal puller to above the upper rim of the susceptor side wall whereby the seam is defined by the upper rim of the susceptor side wall and an outer surface of the crucible side wall, the annular sealing member being adapted for seating on the upper rim of the susceptor in close contact relationship with the outer surface of the crucible side wall substantially about the entire circumference of the outer surface of the crucible side wall to seat over said seam.

13. A crystal puller as set forth in claim 9 wherein the annular sealing member is constructed of graphite.

14. A crystal puller as set forth in claim 13 wherein the annular sealing member is constructed of isomolded graphite.

15. A crystal puller as set forth in claim 9 wherein the susceptor is constructed of at least two pieces, the susceptor pieces generally abutting one another other along a seam comprising a generally vertically extending segment within in the side wall of the susceptor.

16. A crystal puller as set forth in claim 15 wherein the vertically extending segment of the seam between abutting susceptor pieces is directed generally non-radially through the side wall of the susceptor such that the susceptor pieces radially overlap each other along the seam to further inhibit gaseous product against escaping from between the susceptor and the crucible.

17. A method for growing monocrystalline ingots from molten source material in a crystal puller of the type having a crucible adapted for holding source material and a heater adapted for heating the crucible to melt the source material in the crucible, the method comprising the steps of:

seating the crucible in a susceptor mounted in the crystal puller, the susceptor having a bottom and a side wall in generally radially opposed relationship with a side wall of the crucible;

charging semiconductor source material to the crucible;

heating the susceptor and crucible to a temperature sufficient to melt the semiconductor source material held by the crucible, said heating causing the crucible to react with the susceptor therebetween to produce a gaseous product; and

generally sealing said gaseous product between the susceptor and crucible to increase the concentration of said gaseous product therebetween, thereby inhibiting further reaction of the crucible with the susceptor.

18. The method set forth in claim 17 wherein the uppermost radially opposed relationship between the crucible and the susceptor defines a seam therebetween, the step of generally sealing said gaseous product between the susceptor and the crucible comprising placing a sealing member over said seam in close contact relationship with the susceptor side wall and the crucible side wall.

19. The method set forth in claim 18 wherein the susceptor side wall has an upper rim, the seam being defined by the crucible side wall and the upper rim of the susceptor side wall, the step of placing a sealing member over the seam comprising seating the sealing member on the upper rim of the susceptor side wall in close contact relationship with the crucible side wall substantially about the entire circumference of the crucible side wall.